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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,408	10/30/2001	Zengjian Hu	42390P11917	9035

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EXAMINER

SKED, MATTHEW J

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,408

Applicant(s)

HU ET AL.

Examiner

Matthew J. Sked

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The objection to the specification is withdrawn in view of the Applicant's arguments filed 9/09/05.
2. The Applicant did not address the objection to the drawings and the objection stands.
3. The rejection of claims 8, 16 and 24 under 35 USC 112 is withdrawn in view of the amendment filed 9/09/05.
4. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection, necessitated by amendment.
5. Claims 25-27 have been newly added.
6. It is noted that the applicant did not traverse the Official Notice taken in the previous Office Action as per claims 2, 10 and 18 and therefore it is taken to be admitted prior art (see MPEP 2144.03).

Drawings

7. The drawings are objected to because they are handwritten and sloppy. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3, 4, 6-9, 11-17, 19, 20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castellanos et al. (U.S. Pat. Pub. 2003/0014448A1) in view of Razin et al. (U.S. Pat. 6,098,034).

As per claims 1, 9 and 17, Castellanos teaches a method, system and a processor to execute instructions on a machine-readable medium comprising:

creating a suffix tree to determine the frequency of phrases within a text corpus specifying a set of frequently occurring phrases (the frequency of phrases are counted, these counted phrases would constitute a set, paragraph 31); and

filtering the set of frequently occurring phrases to determine a set of frequently occurring and unrecognized phrases as entity name and jargon term candidates (determines if special characters are embedded in a phrase and extracts this technical phrase or proprietary name and places it on the reference word list, because the phrase was never recognized it is unrecognized, and the spell checker identifies further unrecognized words and places them in non-reference word list, the combined unrecognized words are the determined set, paragraphs 30 and 31).

Castellanos does not specifically teach using a suffix tree to determine the frequency of the phrases.

Razin teaches a method of standardizing phrasing in a text in which a suffix tree is constructed where each node in the tree represents the number of recurrences of the particular set of words (col. 3, lines 32-44 and col. 15, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Castellanos to construct a suffix tree to determine the frequency of phrases as taught by Razin because suffix trees are a much more robust method for phrase determination hence giving a better frequency measure of the phrases in the document.

10. As per claims 3, 11 and 19, Castellanos teaches the text corpus is preprocessed (stop words are discarded, paragraph 29).

11. As per claims 4, 12 and 20, Castellanos teaches the text corpus is text of a human language (documents are call logs, paragraph 7).

12. As per claims 6, 14 and 22, Castellanos teaches wherein filtering the set of frequently occurring phrases includes comparing a component word of a phrase to a dictionary of common words and excluding the phrase from the set of entity name and jargon term candidates if the component word is a common word (recognized phrases from the spell checker are placed in the reference word list, paragraph 30).

13. As per claims 7, 15 and 23, Castellanos teaches reducing the set of entity name and jargon term candidates by applying natural language processing rules (frequent words extracted, paragraph 32).

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14. As per claims 8, 16 and 24, Castellanos does not teach the natural language processing rules are rules selected from the list consisting of morphological rules, semantic rules and syntactic rules.

Razin teaches reducing the set of entity name and jargon term candidates by applying natural language processing rules, which includes morphological rules (performs stemming routine to reduce words to their root, col. 12, lines 10-31).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Castellanos so the natural language processing rules include morphological rules as taught by Razin because it would allow the roots of the words to be analyzed hence giving better identification of similar words.

15. As per claims 25-27, Castellanos does not teach excluding a phrase from the set of frequently occurring phrases, wherein the phrase comprises a sub-phrase that occurs at a higher frequency than the phrase.

Razin teaches excluding a phrase from the set of frequently occurring phrases, wherein the phrase comprises a sub-phrase that occurs at a higher frequency than the phrase (nested phrases that occur sufficiently on their own are evaluated rather than the larger phrase, col. 17, lines 10-28).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Castellanos to exclude a phrase from the set of frequently occurring phrases, wherein the phrase comprises a sub-phrase that occurs at a higher frequency than the phrase because as taught by Razin it would remove repetitiveness (col. 17, lines 10-28).

16. Claims 2, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castellanos in view of Razin and taken in further view of Applicant's admitted prior art.

Razin teaches sorting each phrase of the set of frequently occurring phrases in descending order prior to filtering the set of frequently occurring phrases (col. 18, lines 43-60).

Castellanos and Razin do not specifically teach sorting in inverse lexicographical order.

Applicant's admitted prior art teaches that sorting in inverse lexicographical order is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Castellanos and Razin to sort in inverse lexicographical order because it would decrease searching time.

17. Claims 5, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castellanos in view of Razin and taken in view of Chien ("PAT-Tree-Based Keyword Extraction for Chinese Information Retrieval").

Castellanos and Razin do not teach the language to be Chinese.

Chien teaches a system for Chinese information retrieval that filters a prefix tree to remove jargon terms (abstract).

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It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Castellanos and Razin so the language would be in Chinese as taught by Chien because it would make the system more marketable to foreign markets.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Sked whose telephone number is (571) 272-7627. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MS
12/20/05


SUSAN MCFADDEN
PRIMARY EXAMINER